

What is claimed is:

1. A method of extruding dental material from a capsule-like cartridge, comprising:

providing a capsule-like cartridge having an elongated body and a nozzle,

said elongated body having an inner chamber wall enclosing dental material,

said nozzle having an inner channel wall, and a channel wall exit orifice rim,

said inner chamber wall having a chamber wall exit port rim, said chamber wall exit port rim having an opening and being connected to said inner chamber wall and said inner channel wall, said chamber wall exit port rim having a chamber wall exit port rim effective diameter D_1 , said inner channel wall having an inner channel wall effective diameter D_2 , said inner channel wall effective diameter D_2 effectively being greater than said chamber wall exit port rim effective diameter D_1 .

2. The method of claim 1 wherein said capsule-like cartridge further comprises a cap, said cap being supported by said nozzle.

3. The method of claim 2 wherein said nozzle extends from said body and said cap closes an outer end of said nozzle to seal the contents of the

cartridge against ingress of any surrounding contaminating matter.

4. The method of claim 2 wherein said cap is color-coded to indicate desired properties of the contents of the cartridge.

5. The method of claim 1 wherein said capsule-like cartridge further comprises a piston, and said piston and said body are formed from plastic material, said plastic material being impervious to the transmission of ambient light, thereby rendering the cartridge adapted to contain light-curable material in a manner to prevent premature curing of such material while stored in such cartridge.

6. The method of claim 1 wherein said inner channel wall effective diameter D_2 is at least 5 percent greater than said chamber wall exit port rim effective diameter D_1 .

7. The method of claim 1 wherein said inner channel wall effective diameter D_2 is at least 10 percent greater than said chamber wall exit port rim effective diameter D_1 .

8. The method of claim 1 wherein said inner channel wall effective diameter D_2 is at least 20 percent greater than said chamber wall exit port rim effective diameter D_1 .

9. The method of claim 1 wherein said inner channel wall effective diameter D_2 is at least 3 percent greater than said chamber wall exit port rim effective diameter D_1 .

10. The method of claim 1 wherein said inner chamber wall has an inner

chamber wall effective diameter D_3 , and said inner chamber wall effective diameter D_3 is greater than said inner channel wall effective diameter D_2 .

11. A capsule-like cartridge, adapted to be operated solely by being mounted upon an ejector-type holder, said cartridge comprising:

an elongated body, said body being molded from rigid plastic material and having a cylindrical body wall, said cylindrical body wall having a cylindrical inner body wall, a predetermined length, uniform interior diameter, a uniform exterior diameter and a central axis, one end of said cylindrical body wall being open and formed at the extremity thereof with an annular relatively short circular exterior flange, said flange being adapted to be detachably mounted within a complementary seat in an ejector type holder, the opposite end of said body being closed by an end wall having a hemispherical exterior surface and an arcing interior surface, said end wall having substantially greater thickness than said cylindrical body wall,

a nozzle molded integrally with and extending from said end wall at an obtuse angle to said central axis of said cylindrical body wall to direct discharge from said cartridge to the interior of an oral cavity, said nozzle having an effectively cylindrical inner nozzle wall, said nozzle having a nozzle entrance passage, through said end wall to the nozzle,

said nozzle having an inner channel wall, and a channel wall exit orifice rim,

said inner chamber wall having a chamber wall exit port rim, opening

between said inner chamber wall and said inner channel wall, said chamber wall exit port rim having a chamber wall exit port rim effective diameter D_1 , said inner channel wall having an inner channel wall effective diameter D_2 , said inner channel wall effective diameter D_2 effectively being greater than said chamber wall exit port rim effective diameter D_1 ,

a piston having a side wall, said side wall being closely complementary to said cylindrical inner body wall and inserted into the open end thereof.

12. The cartridge of claim 11 further comprising a cap, said cap being supported by said nozzle.

13. The cartridge of claim 12 wherein said nozzle extends from said body and said cap closes an outer end of said nozzle to seal the contents of the cartridge against ingress of any surrounding contaminating matter.

14. The cartridge of claim 12 wherein said cap is color-coded to indicate desired properties of the contents of the cartridge.

15. The cartridge of claim 11 further characterized by said body and piston being formed from plastic material suitably colored to render the same impervious to the transmission of ambient light, thereby rendering the cartridge adapted to contain light-curable material in a manner to prevent premature curing of such material while stored in such cartridge.

16. The cartridge of claim 11 wherein said inner channel wall effective diameter D_2 is at least 5 percent greater than said chamber wall exit port rim effective diameter D_1 .

17. The cartridge of claim 11 wherein said inner channel wall effective diameter D_2 is at least 10 percent greater than said chamber wall exit port rim effective diameter D_1 .

18. The cartridge of claim 11 wherein said inner channel wall effective diameter D_2 is at least 20 percent greater than said chamber wall exit port rim effective diameter D_1 .

19. The cartridge of claim 11 wherein said nozzle entrance passage has a length and said length of said nozzle entrance passage is less than 20 percent of the diameter of said entrance port.

20. The cartridge of claim 11 wherein said nozzle entrance passage has a length and said length of said nozzle entrance passage is more than 3 percent of the diameter of said entrance port.

21. The cartridge of claim 11 wherein said inner chamber wall has an inner chamber wall effective diameter D_3 , and said inner chamber wall effective diameter D_3 is greater than said inner channel wall effective diameter D_2 .

22. The cartridge of claim 11 wherein said nozzle has a bead circumscribing said nozzle.

23. A method of operating a capsule-like cartridge, adapted to be operated solely by being mounted upon an ejector-type holder, comprising:

providing a dental cartridge, comprising:

a molded plastic elongated cartridge body, a piston and 0.01 to 1.0

ml of a polymerizable high viscosity dental composition,

said piston being opaque to actinic light and having a piston sealing wall and a piston outer wall,

said cartridge comprising:

a elongated cartridge body, said body being opaque to actinic light and molded from rigid plastic material and having a cylindrical body wall, said cylindrical body wall having a cylindrical inner body wall, a predetermined length, uniform interior diameter, a uniform exterior diameter and a central axis, one end of said cylindrical body wall being open and formed at the extremity thereof with an annular relatively short circular exterior flange, said flange being adapted to be detachably mounted within a complementary seat in an ejector type holder, the opposite end of said body being closed by an end wall having a hemispherical exterior surface and an arcing interior surface, said end wall having substantially greater thickness than said cylindrical body wall,

a nozzle molded integrally with and extending from said end wall at an obtuse angle to said central axis of said cylindrical body wall to direct discharge from said cartridge to the interior of an oral cavity, said nozzle having an effectively cylindrical inner nozzle wall, said nozzle having a nozzle entrance passage, through said end wall to the nozzle, said nozzle entrance passage having an entrance port and an exit port, said entrance port having an entrance port diameter, said exit port having an exit port diameter, said entrance port diameter being substantially less than said

exit port diameter, and

a canula, said canula being supported by said nozzle.

said elongated cartridge body and said piston enclosing a reservoir portion,

conveying said high viscosity dental composition into said reservoir portion until said piston sealing wall is in sealing position,

storing said dental cartridge for at least one week, and

dispensing said high viscosity dental composition from said reservoir portion onto a dental tooth.